

CASE REPORT

Intraoperative ultrasound-guided enucleation of testicular nodule

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Summary

Objective: We report a case of enucleation of a non-palpable right testicular lesion found incidentally at testicular ultrasonography during investigations in a patient with azoospermia.

Materials and methods: In 2011 bilateral hypoechoic non-palpable testicular lesions (5 mm and 3 mm to the right, 3 mm to the left) were found in a 28 years old patient, during diagnostic investigations for azoospermia. In March 2016, ultrasonography showed that the diameter of the right major nodule had grown to 12 mm, characterized by increased vascularization and increased texture. Blood exams showed serum FSH above normal levels with negative oncologic markers. The patients underwent surgical enucleation of the right nodule under ultrasonography guidance.

Results: In post operative day 1 a control ultrasonography documented the disappearance of the lesion. Histopathologic examination diagnosed a Leydig cell tumor, with negative surgical margins. The patient is in good clinical conditions and is under periodic ultrasonographic follow up.

Conclusion: Organ sparing surgery represent a good therapeutic option for little intraparenchymal lesions, mostly in young patients in which is preferable to preserve fertility. Intraoperative ultrasonography represent an important tool for the localization of the lesion.

KEY WORDS: Leydig cell tumor; Ultrasonography; Testis sparing surgery.

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CASE REPORT

We report a case of resection of a non-palpable right testicular lesion (histopathologic examination revealed a Leydig cell tumor) found incidentally at testicular ultrasonography during investigations in a patient with azoospermia.

MATERIALS AND METHODS

A 28 years old patient underwent surgical enucleation under ultrasonography guidance of a 12 mm nodule to the right testicle.

In 2011 bilateral hypoechoic non-palpable testicular lesions, respectively of 5 mm and 3 mm to the right and 3 mm to the left, were found in the patient during diagnostic investigations for azoospermia. Through the years

periodic ultrasonography follow up showed a progressive increase of the 5 mm right nodule. In March 2016, colorDoppler ultrasound showed that the diameter of the right nodule had grown to 12 mm, characterized by increased vascularization and increased texture to elastography. Blood exams showed serum FSH above normal levels but normal serum LH and testosterone, with negative oncologic markers.

Surgical technique: after right inguinal incision and access to the inguinal canal, the right spermatic cord was identified and isolated to the external inguinal ring, with subsequent exteriorization of the testicle. The testicular nodule was identified with intraoperative ultrasonography and marked with a needle. After incision of tunica albuginea, the nodule was resected by blunt dissection and the surgical specimen was sent to histopathological examination. The tunica albuginea was closed and after the eversion of the tunica vaginalis, the testicle was repositioned in the scrotum. Intraoperative histological examination diagnosed a Leydig cell tumor.

RESULTS

The post operative course was regular, without complications and the patient is in good clinical conditions. In post operative day 1 ultrasonography was performed with the evidence of the disappearance of the lesion in absence of intraparenchymal hematoma. Histopathologic exam diagnosed a Leydig cell tumor with surgical margins free from disease. The tumor was immunopositive for Calretinin, Alpha-inhibin and Melan-A, with a weak positivity for p53.

Because of the presence of bilateral lesions (of stable dimensions through the years) and the positivity for p53, the patients is actually under periodic ultrasound follow up.

DISCUSSION

Leydig cell tumours represent about 1-3% of adult testicular tumours and are most common in the third to sixth decade in adults (1). Only 3% of Leydig cell tumours are bilateral and it is the benign definitive histology in 80% of the cases (1). Frequently its clinical presentation is asymptomatic with typical features as gynaecomastia, infertility or endocrinological disorders

and it is often detected as a collateral finding during radiological investigations (mostly ultrasonography). Testis sparing surgery is highly recommended in every small, non palpable, ultrasound-detected nodule, in absence of rete testis invasion and with normal serum LH and testosterone (1, 2).

If the histological examination reveals a malignant tumor, it is possible to perform a delayed orchidectomy.

CONCLUSIONS

Testis sparing surgery represent a good therapeutic option for little intraparenchymal lesions, mostly in

young patients in which is preferable to preserve fertility. Intraoperative ultrasonography represent an important tool for the precise identification and marking of the lesion, helping guarantee a radical excision as accurate as possible.

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